

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/015244

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ F16D48/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ F16D48/02, F16H61/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Toroku Jitsuyo Shinan Koho	1994-2004
Kokai Jitsuyo Shinan Koho	1971-2004	Jitsuyo Shinan Toroku Koho	1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2001-146928 A (Komatsu Ltd.), 29 May, 2001 (29.05.01), Full text; all drawings & US 6405844 B1 Full text; all drawings	1-6, 10-12
Y	JP 7-1993 A (Caterpillar Inc.), 06 January, 1995 (06.01.95), Column 6, lines 7 to 14; Fig. 3 & US 5380257 A Column 4, line 57 to column 5, line 4; Fig. 3 & EP 616918 A1	1-6, 10-12
Y	JP 4-50519 A (Isuzu Motors Ltd.), 19 February, 1992 (19.02.92), Page 3, lower left column, lines 6 to 8; Fig. 1 (Family: none)	2

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"P" document published prior to the international filing date but later than the priority date claimed

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Date of the actual completion of the international search
14 December, 2004 (14.12.04)Date of mailing of the international search report
28 December, 2004 (28.12.04)Name and mailing address of the ISA/
Japanese Patent Office

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 11-230334 A (Komatsu Ltd.), 27 August, 1999 (27.08.99), Full text; all drawings (Family: none)	1-12
A	JP 3-92623 A (Toyoda Automatic Loom Works, Ltd.), 17 April, 1991 (17.04.91), Full text; all drawings (Family: none)	1-12
A	JP 2002-254961 A (Robert Bosch GmbH.), 11 September, 2002 (11.09.02), Full text; all drawings & DE 10065725 A & FR 2818936 A	1-12